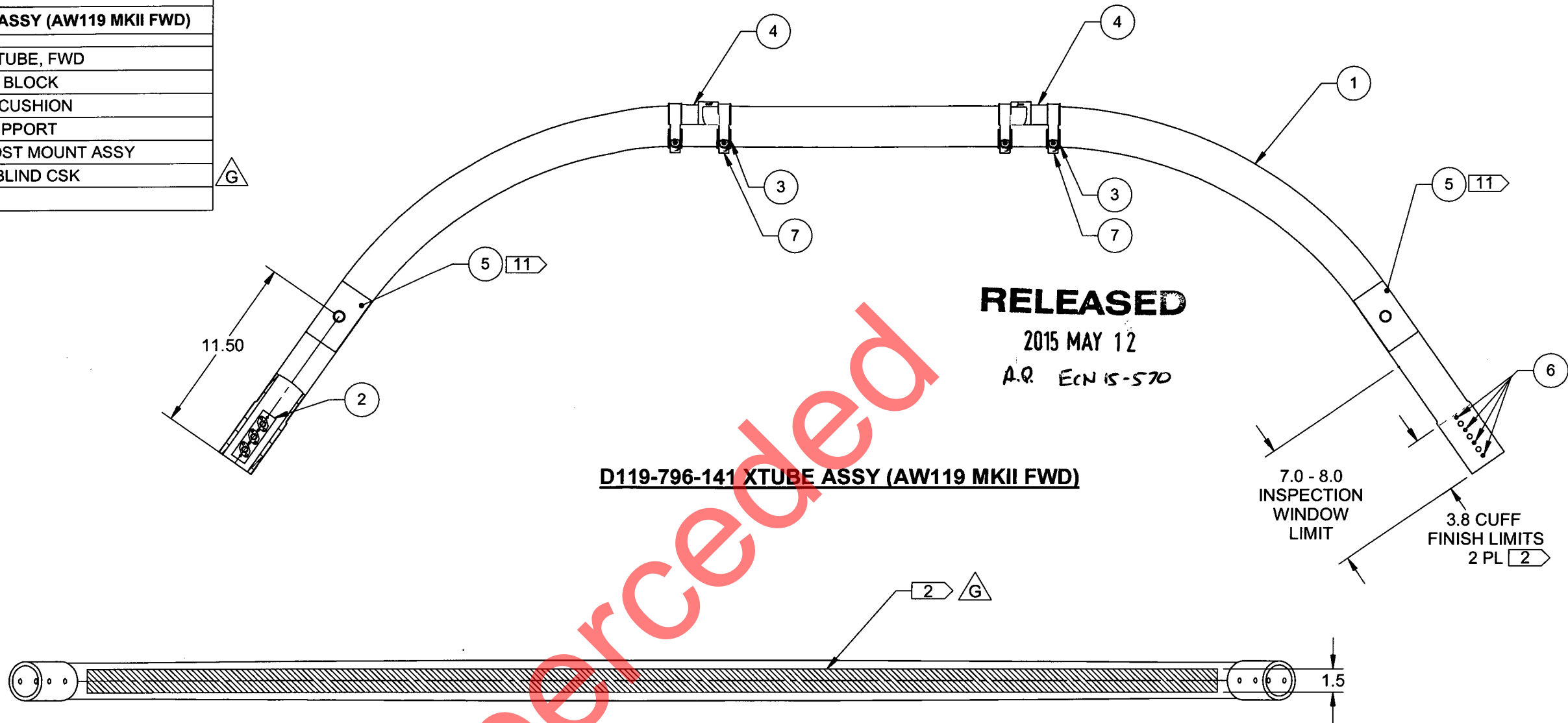


| ITEM | QTY<br>-141 | P/N             | DESCRIPTION                 |
|------|-------------|-----------------|-----------------------------|
|      | X           | D119-796-141    | XTUBE ASSY (AW119 MKII FWD) |
| 1    | 1           | D119-796-141BND | CROSSTUBE, FWD              |
| 2    | 4           | D2873-043       | RADIUS BLOCK                |
| 3    | 4           | D5123-3         | CLAMP CUSHION               |
| 4    | 2           | D5124-1         | FWD SUPPORT                 |
| 5    | 2           | D5152-041       | FWD POST MOUNT ASSY         |
| 6    | 16          | CR3212-4-08     | RIVET, BLIND CSK            |
| 7    | 4           | MS21920-24      | CLAMP                       |



D119-796-141 XTUBE ASSY (AW119 MKII FWD)

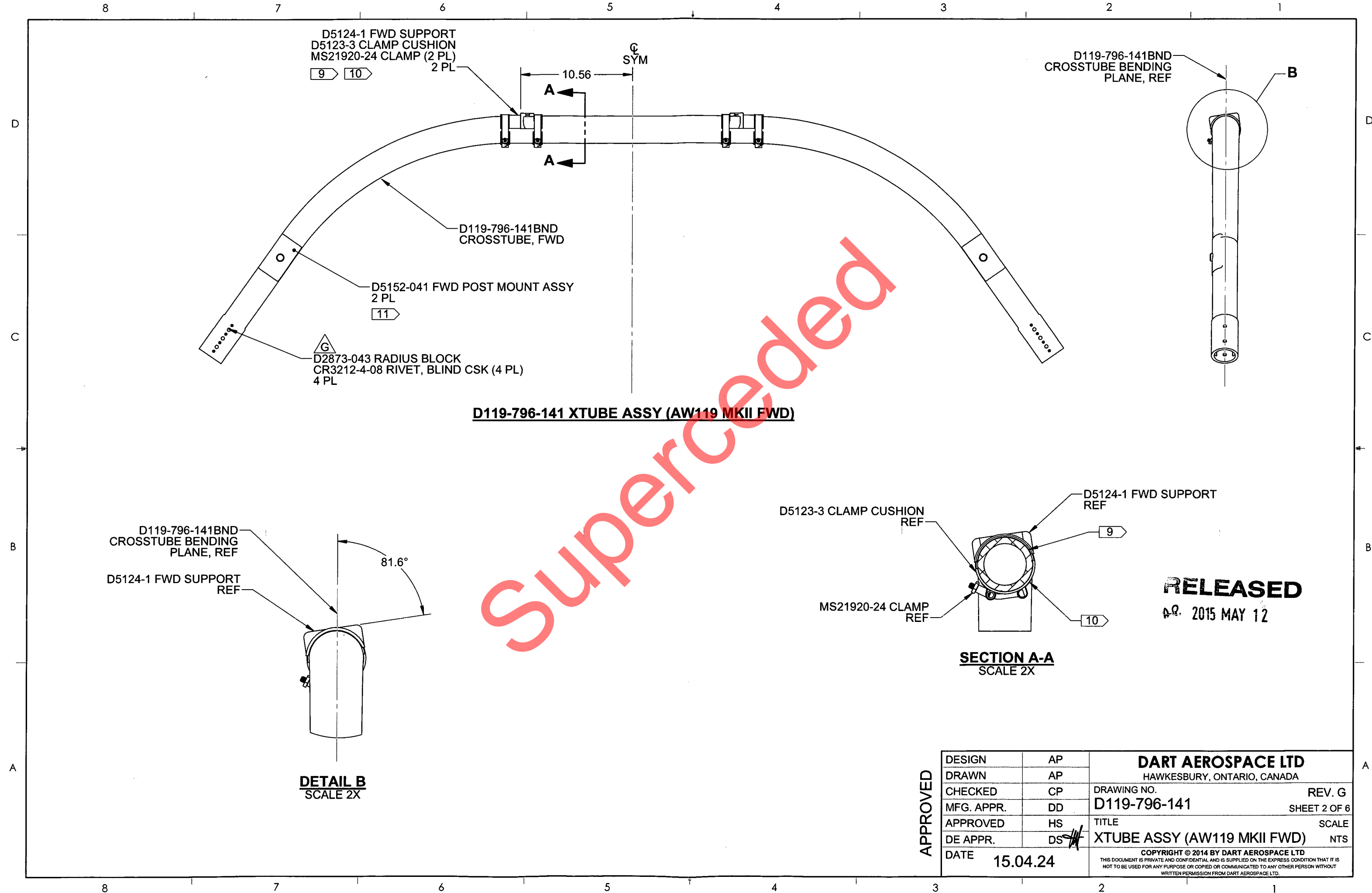
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: APPLY MATTE CLEAR COAT PER QSI 005 4.2  
MASK UNDERSIDE OF CROSSTUBE AS SHOWN (B3-1, HATCHED AREA), PAINT OUTSIDE PER DART QSI 005 4.2 AFTER APPLYING CLEAR  
DO NOT APPLY FINISH (PAINT OR CLEAR COAT) TO CUFFS IN LOCATION SHOWN, MASK PRIOR TO FINISHING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY USING PART NUMBER "D119-796-141" AND BATCH NUMBER ON INSIDE OF CUFF PER QSI 044 6.4
- 7) WEIGHT: 18.43 lbs
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE.  
THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM DEFECTS SUCH AS SCRATCHES, NICKS OR DENTS.  
DEFECTS UP TO 0.005 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 9) AFTER FINISHING, ABRASE MATING SURFACES OF D5124-1 FWD SUPPORTS AND CROSSTUBE WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH'N'WIPE DEGREASER. APPLY A 0.100 MIN THK LAYER OF PROSEAL 890 ON THE INSIDE CONCAVE SURFACE OF THE D5124-1 FWD SUPPORTS AND INSTALL AT AN 8.4° OFFSET FROM THE CROSSTUBE BENDING PLANE. INSTALL THE MS21920-24 CLAMPS AND D5123-3 CLAMP CUSHIONS WHILE WET.
- 10) TORQUE MS21920 CLAMPS 80 - 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY, THE NUT IS FACING AFT AND HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.
- 11) PRIOR TO FINISHING, ABRASE MATING SURFACES OF CROSSTUBE AND D5152-041 WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH'N'WIPE DEGREASER. INSTALL D5152-041 WITH LAYER OF PROSEAL 890 ON INSIDE CONCAVE SURFACE, 0.100 MIN THK. LOCATE D5152-041 USING TOOL DT10089.

|      |  |    |          |
|------|--|----|----------|
| G    | FINISHING ORDER ADJUSTED, CR3212-4-08 WAS -07, CUFF DIA TOLERANCE INCREASED TO +/- 0.005   | AP | 15.04.24 |
| F    | REMOVED PRIME/ PAINT ON CUFFS, 2.516 WAS 2.500 (C8-5)  | AP | 15.02.03 |
| E    | D5152-041 FWD STEP POST ASSY WAS D5150-1 STEP POST, SCOTCH BRITE 7447 RED WAS 180 GRIT SANDPAPER, ANGLE (B7-2) DIMENSIONED FROM NEW DATUM                                      | DB | 15.01.15 |
| D    | ADD D5150-1 STEP POST (2X), MOVED INSPECTION WINDOW DETAIL TO SHEET 1, MODIFIED NOTES ON SHT 1 & 3   | DB | 14.11.25 |
| C    | CR3212-4-07 RIVETS WERE CR3212-4-09, 7.5 DEG CUFF ANGLE OFFSET REMOVED (SHT 3), CUFF DIAMETER ON D119-796-141TRN REDUCED TO 2.500, ADDED INSPECTION WINDOW (B7-3), ADDED SHT 4 | AP | 14.10.23 |
| B    | ADDED D2873-043 RADIUS BLOCK, CR3212-4-09 RIVETS, ADDED SKIDTUBE REFERENCE FOR LOCATING CUFF HOLES. RO-ORGANIZED NOTES AND REMOVED REDUNDANT INFORMATION                       | AP | 14.09.02 |
| A    | NEW ISSUE  | AP | 14.08.09 |
| REV. | DESCRIPTION  | BY | DATE     |

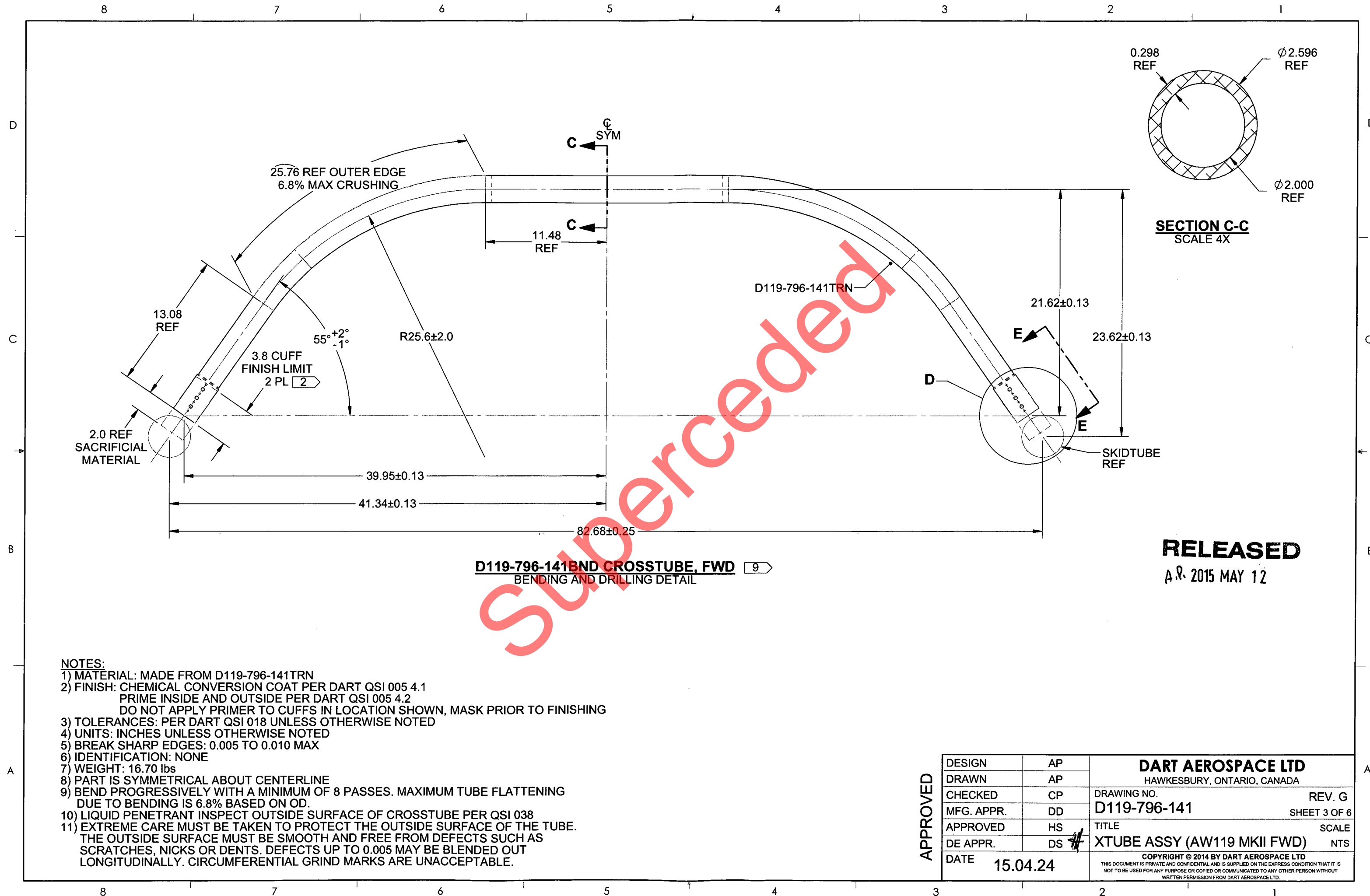
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|------------|----------|--|--------------|
| DESIGN     | AP       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |              |
| DRAWN      | AP       |  |              |
| CHECKED    | CP       | DRAWING NO.  | REV. G       |
| MFG. APPR. | DD       | <b>D119-796-141</b>  | SHEET 1 OF 6 |
| APPROVED   | HS       | TITLE  | SCALE        |
| DE APPR.   | DS       | <b>XTUBE ASSY (AW119 MKII FWD)</b>   | NTS          |
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| DRAWN      | AP       |   |              |
| CHECKED    | CP       | DRAWING NO.   | REV. G       |
| MFG. APPR. | DD       | <b>D119-796-141</b>   | SHEET 2 OF 6 |
| APPROVED   | HS       | TITLE   | SCALE        |
| DE APPR.   | DS       | <b>XTUBE ASSY (AW119 MKII FWD)</b>  | NTS          |
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- NOTES:
- 1) MATERIAL: MADE FROM D119-796-141TRN
  - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
DO NOT APPLY PRIMER TO CUFFS IN LOCATION SHOWN, MASK PRIOR TO FINISHING
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 16.70 lbs
  - 8) PART IS SYMMETRICAL ABOUT CENTERLINE
  - 9) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6.8% BASED ON OD.
  - 10) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038
  - 11) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM DEFECTS SUCH AS SCRATCHES, NICKS OR DENTS. DEFECTS UP TO 0.005 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

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| DRAWN      | AP       |  |              |
| CHECKED    | CP       | DRAWING NO.  | REV. G       |
| MFG. APPR. | DD       | D119-796-141   | SHEET 3 OF 6 |
| APPROVED   | HS       | TITLE  | SCALE        |
| DE APPR.   | DS       | XTUBE ASSY (AW119 MKII FWD)  | NTS          |
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AR 2015 MAY 12

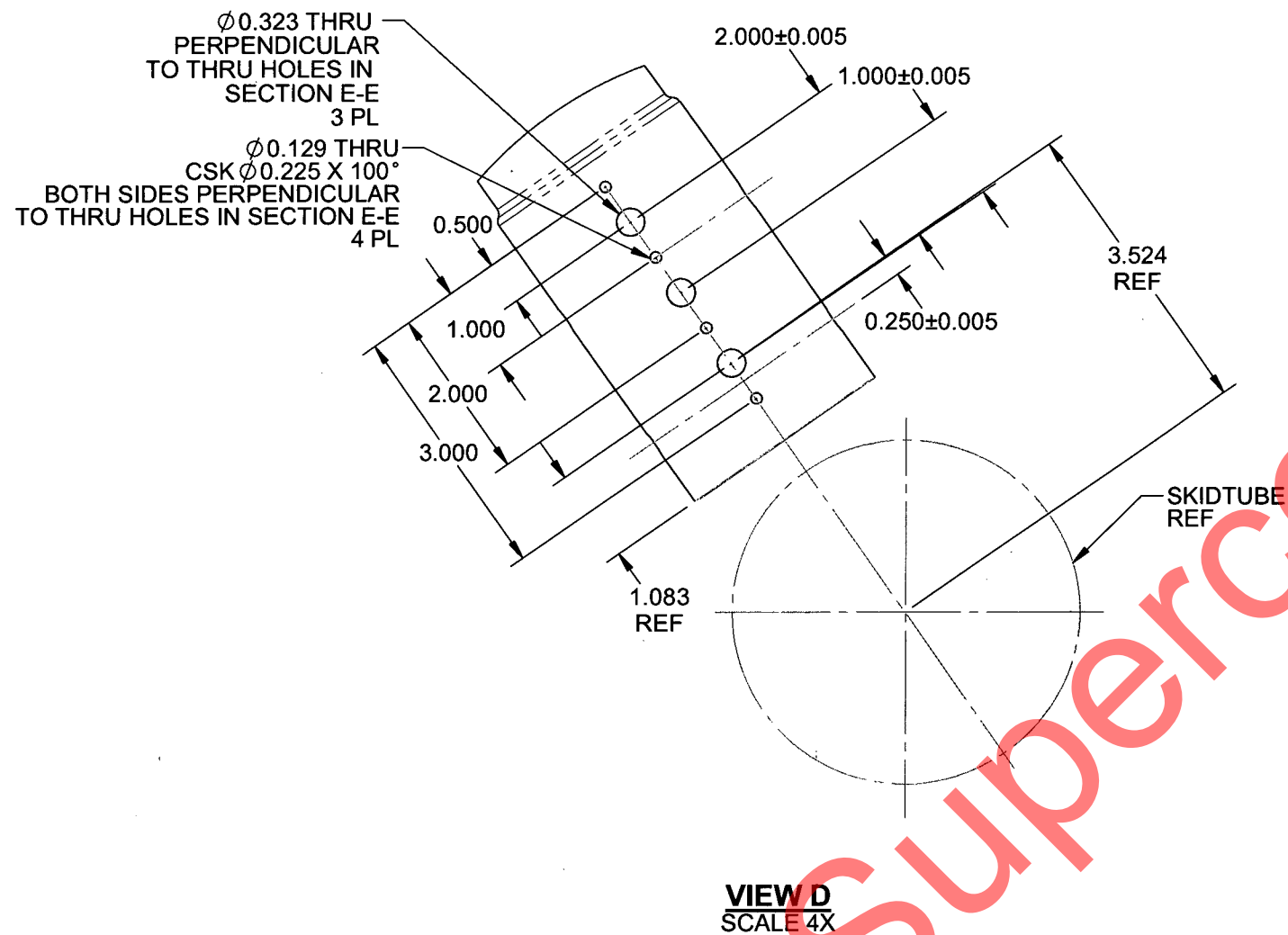
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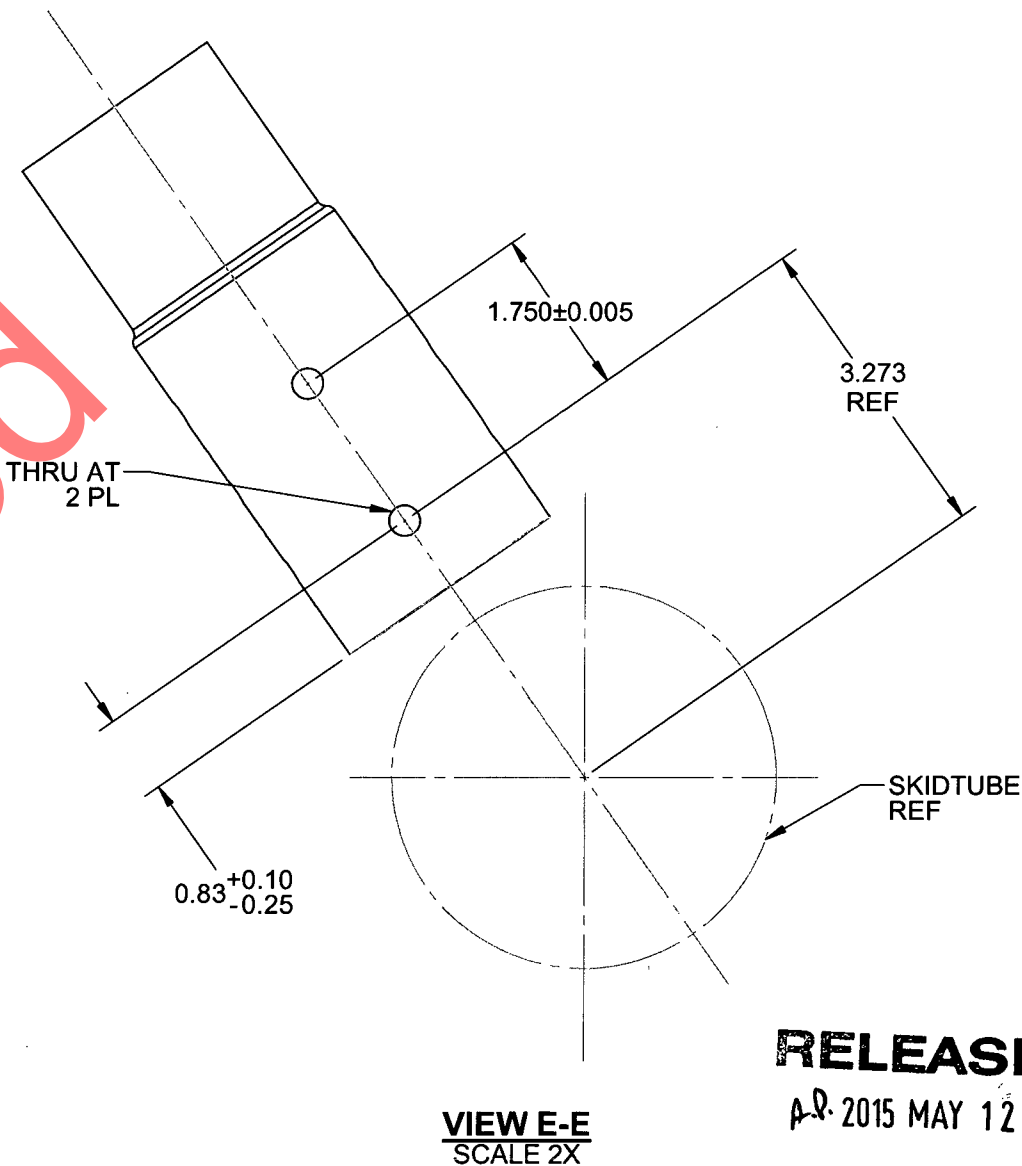
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A.D. 2015 MAY 12

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| DRAWN      | AP       |  |              |
| CHECKED    | CP       | DRAWING NO.  | REV. G       |
| MFG. APPR. | DD       | <b>D119-796-141</b>  | SHEET 4 OF 6 |
| APPROVED   | HS       | TITLE  | SCALE        |
| DE APPR.   | DS       | <b>XTUBE ASSY (AW119 MKII FWD)</b>   | NTS          |
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**D119-796-141TRN CROSSTUBE, FWD**

- NOTES:**
- 1) MATERIAL: MANUFACTURE FROM D6005-103  
FINISHED LENGTH =  $102.26 \pm 0.020$  (BEFORE BENDING/TRIMMING)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 16.70 lbs
  - 8) PART IS SYMMETRICAL ABOUT CENTERLINE

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|------------|-----------------|--|--------------|
| DESIGN     | AP              | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |              |
| DRAWN      | AP              |  |              |
| CHECKED    | CP              | DRAWING NO.  | REV. G       |
| MFG. APPR. | DD              | <b>D119-796-141</b>  | SHEET 5 OF 6 |
| APPROVED   | HS              | TITLE  | SCALE        |
| DE APPR.   | DS              | <b>XTUBE ASSY (AW119 MKII FWD)</b>   | NTS          |
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